

Improvements in Facilities, Communications, and Equipment at Biological Field Stations and Marine Laboratories (FSML)

Program Guidelines

Directorate for Biological Sciences
Division of Biological Infrastructure

in collaboration with

Directorate for Geosciences
Division of Ocean Sciences

*Proposals must be postmarked by:
First Friday in March*



NATIONAL SCIENCE FOUNDATION

Biological Field Stations and Marine Laboratories

Purpose

Biological Field Stations and Marine Laboratories (FSMLs) are **off-campus** facilities for research and education conducted in the natural habitats of terrestrial, freshwater, and marine ecosystems. FSMLs support biological research and education by preserving and providing access to study areas and organisms, by providing physical plant and equipment in close proximity to those study areas, and by fostering an atmosphere of mutual scientific interest and collaboration in research and education. If FSMLs are to fulfill their role in biological research and education, they must offer modern laboratories and educational spaces, up-to-date equipment, appropriate personal accommodations for visiting scientists and students, and “user-friendly” communication and data management systems for a broad array of users. In recognition of these needs, NSF provides limited support for FSMLs through this program. To this end, proposals are sought which address these general goals of FSML improvement.

Successful proposals will present compelling arguments and justification based upon demonstrated need and realistically appraised impact of proposed improvements and acquisitions on biological research and education at FSMLs. Proposals should focus on specific and definable projects of physical plant improvement, major scientific equipment acquisition, data management and communication system implementation, or institutional planning for such needs.

***Physical plant improvement** may include renovation of existing structures as well as construction of new spaces for research and associated training and education responsibilities or personal accommodations for visiting scientists and students.

*** Equipment** proposals should focus on major multi-user or general use items (including special purpose vehicles and boats) that can be shown to be essential to the facility’s research agenda and associated training and education responsibilities.

*** Data management and communication system implementation** proposals should employ appropriate and up-to-date technologies and be directed toward broad community use of such systems for research and education collaboration on the Internet.

*** Proposals for institutional planning** should address comprehensive planning at the level of the whole facility in

support of its research and training mission and should produce plans useful in at least a five-year time frame. Planning proposals may address, but are not limited to, facility needs appraisal and design activities and research/training program development and will normally be cast in the format of workshops, conferences, and visits designed to involve broad participation of the scientific community outside the applicant institution. A planning grant does not imply an NSF commitment beyond the planning period.

Conceptual Issues

Although the primary purpose of the FSML program is to underwrite physical acquisitions and improvements - or the planning for such - at biological field research facilities, the complete agenda for the program is broader in concept. It is expected that the program will assist its constituents in achieving new and higher levels of collaboration and integration on scientific and educational fronts. The added emphasis on *data management and communication system implementation* should foster new or expanded opportunities for larger spatial and temporal scales of research and substantive comparisons among biological entities in different biomes. It is likely that new collaborations among scientists and across disciplines and in different locations will grow from this emphasis and that open access to datasets will provide the impetus for new directions of scientific inquiry. Continuing support for *physical plant improvement and equipment* will assist in providing the most conducive research environment possible for individual researchers, but should also produce positive effects in promoting additional collaborations and in integrating research and education programs both within and among FSMLs. Examples of broad scientific questions and education innovations that might be fostered by FSML support include:

1. ecological changes over large spatial and temporal scales;
2. demographic shifts in ecologically sensitive populations;
3. comparative physiological studies across habitats or among related organisms;
4. comparative neurobiological studies of appropriate organisms;
5. comparative hybrid zone studies;
6. computer-aided taxonomic identification or inventorying; and
7. student research project planning and field course selection.

Eligibility

Proposals will be accepted from U.S. colleges and universities, free-standing research and education institutions, and U.S. chartered corporations with formally constituted research and education programs at field stations or marine laboratories. In order to qualify for support through the FSML competition, the research and education programs at a submitting facility must focus primarily on biological phenomena and organisms in natural habitats or on organisms whose availability for research depends upon the facility. It is also expected that the majority of research and education projects which use the applicant facility as a platform for their execution would be supportable through the research and education programs of the National Science Foundation. Agriculture, aquaculture, and mariculture facilities are not eligible for support. Only one proposal may be submitted to any one round of the FSML competition by any single facility.

Budgets and Cost Sharing

Proposals for full FSML awards may not exceed \$250,000. Proposals for planning grants may not exceed \$25,000. In planning and budgeting for any FSML proposal, the budget should be prepared in a manner such that the costs of the entire project are itemized in the "Budget Justification." Institutional cost-sharing contributions should then be applied to the project's costs (either to specific line items or to all line items by proportion) resulting in a "bottom line" request to NSF that is not more than \$250,000, meets the requirements of the cost-sharing schedule given below, and is presented on the official NSF budget form. **Only** costs contributed to the project as planned and budgeted will be acceptable as cost-sharing. The FSML program will **not** normally support salaries of any kind. Indirect costs are also not appropriate. Under no circumstances will FSML funds be allocated for the cost of land acquisition.

Over the past 5 years, the FSML program has provided \$1.2 - \$1.5 million in support of 10-15 awards annually. Pending availability of funds, it is anticipated that this approximate level of support will continue.

Cost-Sharing Schedule

Requested of NSF Required Cost-Share (Institutional \$: NSF \$)

up to \$ 99,999	1 : 4
\$100,000 - \$149,999	1 : 3
\$150,000 - \$199,999	1 : 2
\$200,000 - \$250,000	1 : 1

NOTE: *Those FSMLs that have not received support from the program in any of the five immediately previous compe-*

titions may apply for full grants up to \$50,000 without required cost-sharing.

Proposal Format and Content

Proposal content and format requirements given in the ***Grant Proposal Guide [GPG] (NSF 98-2)*** or its successor documents of instruction **must be followed** subject to the following section-by-section interpretations.

1. **Cover Sheet:** As stated in GPG with the exception that the proposal title should begin with the prefix "FSML."
2. **Project Summary:** As stated in GPG and in the context of a FSML proposal.
3. **Table of Contents:** As stated in GPG.
4. **Project Description:** As stated in GPG and in the context of a FSML proposal. **Note** - *"Results from Prior NSF Support" should report only the accomplishments under FSML awards for the applicant facility (regardless of PI) during the previous five-year period.*

The text should deal primarily with the following **required** items of information:

- a. Description of the basic existing facility and its capabilities for supporting scientific research and training (site history, facility administration, research areas, buildings, equipment, access and transportation, automated data acquisition systems, data management, communications, staff, and other items of interest).
- b. Description of the proposed FSML improvements or planning efforts with justification based upon scientific research and training needs as appraised by some logic-based process. Special care should be taken to demonstrate how improvements will specifically benefit visiting scientists and students.
- c. Description of the research and training use of the facility for the most recent five-year period: scientist and student use days, research projects supported, courses (both academic and public) conducted, special activities hosted (e.g. workshops, conferences), etc.
- d. Summary of the most significant research and training accomplishments attributable to the facility during the most recent five- year period.
- e. Selected bibliography (maximum of 10 complete references) of the most significant research publications attributable to the facility during the most recent five-year

period. Other publications may be summarized in tabular format as counts of particular types of publications.

f. Other items of importance not specifically indicated above.

NOTE: *All material for item #4 (including all pertinent tables and figures) must fit within the 15-page proposal text limit.*

5. **Bibliography:** As stated in GPG.

6. **Biographical Sketches:** As stated in GPG.

7. **Budget:** As stated in GPG with the exception that no salaries or indirect costs are appropriate. Be sure to use the appropriate current NSF budget form and to clearly distinguish, in the “Budget Justification”, between funds requested from NSF and those to be provided as cost sharing.

8. **Current and Pending Support:** As stated in GPG.

9. **Facilities, Equipment and Other Resources:** Not necessary since these have been described earlier.

10. **Special Information and Supplementary Documentation:** As stated in GPG and including the requirement for “Certification of Flood Protection” as required under the Flood Disaster and Protection Act of 1973 for all new construction or physical plant renovation. All facilities must certify that the facility is not in a special flood hazard area identified by HUD, or that adequate flood insurance under this act has been obtained if the facility is in such an area (see NSF Grant Policy Manual, section 723).

11. **Appendices:** The only appendices allowed for FSML proposals are copies of site plans, building floorplans, vendor/builder quotes, architectural/engineering statements, and letters of collaboration or support. No other appendices should be included.

Proposal Submission and Review

Submit the original proposal (printed on one side of the page only) and 12 copies to:

Announcement No. NSF 98-17
Proposal Processing Unit-Room P60
National Science Foundation
4201 Wilson Boulevard
Arlington, VA 22230

Proposals to the FSML program will be reviewed within six months following the proposal deadline in accordance

with NSF policy. Proposals received after the deadline will be returned and not reviewed. Proposals will undergo merit review with criteria drawn from the guidelines for merit review in the *Grant Proposal Guide* as well as from the requirements stated in these guidelines. Scientific review of FSML proposals will center upon, but not be exclusive to the following areas:

1. Intrinsic merit of the project for supporting appropriate research and training activities at the applicant facility;

2. Thoroughness and appropriateness of the planning and evaluation process that led to the specific proposal presented;

3. Justification, in terms of research and training mission and programs, of the request;

4. Appraisal of the role and impact of the facility on the progress of biological research and education at regional and national levels;

5. Prospective impact of the project on the improvement of biological research and training at the facility;

6. Relevance of the proposed improvements to the more effective and productive accommodation of visiting scientists and students;

7. Documented research and training productivity of the facility during the most recent five-year period;

8. Relevance and scope of databases and their network accessibility to the research community, quality of the data management program, and utilization of standard communications protocols; and

9. Meeting or exceeding cost-sharing requirements.

Grant Administration

Grants awarded as a result of this announcement are administered in accordance with the terms and conditions of NSF GC-1, “Grant General Conditions,” or FDP-III, “Federal Demonstration Project General Terms and Conditions,” depending on the grantee organization. Copies of these documents are available at no cost from the NSF Forms and Publications Unit, National Science Foundation, P.O. Box 218, Jessup, MD 20794-0218, telephone (301) 947-2722, or via e-mail (pubs@nsf.gov). More comprehensive information is contained in the NSF Grant Policy Manual, for sale through

the Superintendent of Documents, Government Printing Office, Washington DC 20402.

Other Related Programs

In addition to the FSML program there are other NSF programs that present opportunities for support applicable to the FSML environment. Listed below are several of the most pertinent of those programs. It is suggested that prospective applicants discuss opportunities with the FSML program director before preparing a proposal. Program announcements and updates on funding opportunities may also be accessed via the NSF "Home Page" posted on the "World-Wide Web" <<http://www.nsf.gov>>.

- Multi-User Biological Equipment and Instrumentation Resources
- Database Activities in the Biological Sciences
- Academic Research Infrastructure (ARI) Program
- Instrumentation and Laboratory Improvement Program
- Facilitation Awards for Scientists and Engineers with Disabilities
- Ocean Technology and Interdisciplinary Coordination
- Oceanographic Centers and Facilities

Contact:

Dr. Gerald Selzer
Program Director
Telephone: (703) 306-1469
Email: gselzer@nsf.gov

The Foundation provides awards for research and education in the sciences and engineering. The awardee is wholly responsible for the conduct of such research and preparation of the results for publication. The Foundation, therefore, does not assume responsibility for the research findings or their interpretation.

The Foundation welcomes proposals from all qualified scientists and engineers and strongly encourages women, minorities, and persons with disabilities to compete fully in any of the research and education related programs described here. In accordance with federal statutes, regulations, and

NSF policies, no person on grounds of race, color, age, sex, national origin, or disability shall be excluded from participation in, be denied the benefits of, or be subject to discrimination under any program or activity receiving financial assistance from the National Science Foundation.

Facilitation Awards for Scientists and Engineers with Disabilities (FASED) provide funding for special assistance or equipment to enable persons with disabilities (investigators and other staff, including student research assistants) to work on NSF projects. See the program announcement or contact the program coordinator at (703) 306-1636.

Privacy Act. The information requested on proposal forms is solicited under the authority of the National Science Foundation Act of 1950, as amended. It will be used in connection with the selection of qualified proposals and may be disclosed to qualified reviewers and staff assistants as part of the review process; to applicant institutions/grantees; to provide or obtain data regarding the application review process, award decisions, or the administration of awards; to government contractors, experts, volunteers, and researchers as necessary to complete assigned work; and to other government agencies in order to coordinate programs. See Systems of Records, NSF 50, Principal Investigators/Proposal File and Associated Records, and NSF-51, 60 Federal Register 4449 (January 23, 1995), Reviewer/Proposal File and Associated Records, 59 Federal Register 8031 (February 17, 1994).

Public Burden. Submission of the information is voluntary. Failure to provide full and complete information, however, may reduce the possibility of your receiving an award.

The public reporting burden for this collection of information is estimated to average 120 hours per response, including the time for reviewing instructions. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Gail A. McHenry, Reports Clearance Officer, Information Dissemination Branch, National Science Foundation, 4201 Wilson Boulevard, Suite 245, Arlington, VA 22230.

The National Science Foundation has TDD (Telephonic Device for the Deaf) capability, which enables individuals with hearing impairment to communicate with the Foundation about NSF programs, employment, or general information. To access NSF TDD, dial (703) 306-0090; for FIRS, 1-800-877-8339.

Catalog of Federal Domestic Assistance Numbers:
47.074 Biological Sciences; 47.050 Geosciences

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